

In re Appln. No. 10/525,567
Amdt. dated October 6, 2005
Reply to Notice to Comply August 10, 2005

IN THE SEQUENCE LISTING

Please substitute the attached Sequence Listing
section for the originally filed Sequence Listing.

SEQUENCE LISTING

<110> KABUSHIKI KAISHA HAYASHIBARA SEIBUTSU KAGAKU KENKYUJO
OKAMOTO, Iwao
ARAI, Norie
KOHNO, Keizo
KURIMOTO, Masashi
SANO, Osamu

<120> ANTI-ALLERGIC AGENT

<130> OKAMOTO11

<140> 10/525,567

<141> 2005-02-25

<150> JP 2002-252087

<151> 2002-08-29

<150> JP 2003-22776

<151> 2003-01-30

<160> 12

<170> PatentIn version 3.3

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<213> Apis mellifera

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<213> Apis mellifera

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Asp Glu Arg Arg Asp Ala Ala Ile Lys Ser Gly Glu Phe Asp His Thr
 35 40 45

Lys Asn Tyr Pro Phe Asp Val Asp Arg Trp Arg Asp Lys Thr Phe Val
 50 55 60

Thr Ile Glu Arg Asn Asn Gly Val Pro Ser Ser Leu Asn Val Val Thr
 65 70 75 80

Asn Lys Lys Gly Lys Gly Gly Pro Leu Leu Arg Pro Tyr Pro Asp Trp
 85 90 95

Ser Phe Ala Lys Tyr Glu Asp Cys Ser Gly Ile Val Ser Ala Phe Lys
 100 105 110

Ile Ala Val Asp Lys Phe Asp Arg Leu Trp Val Leu Asp Ser Gly Leu
 115 120 125

Val Asn Asn Asn Gln Pro Met Cys Ser Pro Lys Leu Leu Thr Phe Asp
 130 135 140

Leu Lys Thr Ser Lys Leu Val Lys Gln Val Glu Ile Pro His Asn Ile
 145 150 155 160

Ala Val Asn Ala Thr Thr Gly Met Gly Glu Leu Val Ser Leu Ala Val
 165 170 175

Gln Ala Ile Asp Arg Thr Asn Thr Met Val Tyr Ile Ala Asp Glu Lys
 180 185 190

Gly Glu Gly Leu Ile Met Tyr Gln Asn Ser Asp Asp Ser Phe His Arg
 195 200 205

Leu Thr Ser Asn Thr Phe Asp Tyr Asp Pro Arg Tyr Thr Lys Leu Thr
 210 215 220

Val Ala Gly Glu Ser Phe Thr Val Lys Asn Gly Ile Cys Gly Ile Ala

225		230		235		240
Leu Ser Pro Val Thr Asn Asn Leu Tyr Tyr Ser Pro Leu Ser Ser His						
		245		250		255
Gly Leu Tyr Tyr Val Asp Thr Glu Gln Phe Arg Asn Pro Gln Tyr Glu						
		260		265		270
Glu Asn Asn Val Gln Tyr Glu Gly Ser Gln Asp Ile Leu Asn Thr Gln						
		275		280		285
Ser Phe Gly Lys Val Val Ser Lys Asn Gly Val Leu Phe Leu Gly Leu						
		290		295		300
Val Gly Asn Ser Gly Ile Ala Cys Val Asn Glu His Gln Val Leu Gln						
305		310		315		320
Arg Glu Ser Phe Asp Val Val Ala Gln Asn Glu Glu Thr Leu Gln Met						
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Ile Val Ser Met Lys Ile Met Glu Asn Leu Pro Gln Ser Gly Arg Ile						
		340		345		350
Asn Asp Pro Glu Gly Asn Glu Tyr Met Leu Ala Leu Ser Asn Arg Met						
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Gln Lys Ile Ile Asn Asn Asp Phe Asn Phe Asn Asp Val Asn Phe Arg						
		370		375		380
Ile Leu Gly Ala Asn Val Asp Asp Leu Met Arg Asn Thr Arg Cys Gly						
385		390		395		400
Arg Tyr His Asn Gln Asn Ala Gly Asn Gln Asn Ala Asp Asn Gln Asn						
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Ala Asp Asn Gln Asn Ala Asn Asn Gln Asn Ala Asp Asn Gln Asn Ala						
		420		425		430
Asn Lys Gln Asn Gly Asn Arg Gln Asn Asp Asn Arg Gln Asn Asp Asn						
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Lys Gln Asn Gly Asn Arg Gln Asn Asp Asn Lys Gln Asn Gly Asn Arg						
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Gln Asn Asp Asn Lys Gln Asn Gly Asn Arg Gln Asn Gly Asn Lys Gln
 465 470 475 480

Asn Asp Asn Lys Gln Asn Gly Asn Arg Gln Asn Asp Asn Lys Arg Asn
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Asp Ala Ile Leu Ser Gly Glu Tyr Asp Tyr Lys Asn Asn Tyr Pro Ser
 35 40 45

Asp Ile Asp Gln Trp His Asp Lys Ile Phe Val Thr Met Leu Arg Tyr
 50 55 60

Asn Gly Val Pro Ser Ser Leu Asn Val Ile Ser Lys Lys Val Gly Asp
 65 70 75 80

Gly Gly Pro Leu Leu Gln Pro Tyr Pro Asp Trp Ser Phe Ala Lys Tyr
 85 90 95

Asp Asp Cys Ser Gly Ile Val Ser Ala Ser Lys Leu Ala Ile Asp Lys
 100 105 110

Cys Asp Arg Leu Trp Val Leu Asp Ser Gly Leu Val Asn Asn Thr Gln
 115 120 125

Pro Met Cys Ser Pro Lys Leu Leu Thr Phe Asp Leu Thr Thr Ser Gln
 130 135 140

Leu Leu Lys Gln Val Glu Ile Pro His Asp Val Ala Val Asn Ala Thr
 145 150 155 160

Thr Gly Lys Gly Arg Leu Ser Ser Leu Ala Val Gln Ser Leu Asp Cys
 165 170 175

Asn Thr Asn Ser Asp Thr Met Val Tyr Ile Ala Asp Glu Lys Gly Glu
 180 185 190

Gly Leu Ile Val Tyr His Asn Ser Asp Asp Ser Phe His Arg Leu Thr
 195 200 205

Ser Asn Thr Phe Asp Tyr Asp Pro Lys Phe Thr Lys Met Thr Ile Asp
 210 215 220

Gly Glu Ser Tyr Thr Ala Gln Asp Gly Ile Ser Gly Met Ala Leu Ser
 225 230 235 240

Pro Met Thr Asn Asn Leu Tyr Tyr Ser Pro Val Ala Ser Thr Ser Leu
 245 250 255

Tyr Tyr Val Asn Thr Glu Gln Phe Arg Thr Ser Asp Tyr Gln Gln Asn
 260 265 270

Asp Ile His Tyr Glu Gly Val Gln Asn Ile Leu Asp Thr Gln Ser Ser
 275 280 285

Ala Lys Val Val Ser Lys Ser Gly Val Leu Phe Phe Gly Leu Val Gly
 290 295 300

Asp Ser Ala Leu Gly Cys Trp Asn Glu His Arg Thr Leu Glu Arg His
 305 310 315 320

Asn Ile Arg Thr Val Ala Gln Ser Asp Glu Thr Leu Gln Met Ile Ala
 325 330 335

Ser Met Lys Ile Lys Glu Ala Xaa Pro His Val Pro Ile Phe Asp Arg
 340 345 350

Tyr Ile Asn Arg Glu Tyr Ile Leu Val Leu Ser Asn Lys Met Gln Lys
 355 360 365

Met Val Asn Asn Asp Phe Asn Phe Asp Asp Val Asn Phe Arg Ile Met
 370 375 380

Asn Ala Asn Val Asn Glu Leu Ile Leu Asn Thr Arg Cys Glu Asn Pro
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Asp Asn Asp Arg Thr Pro Phe Lys Ile Ser Ile His Leu
 405 410

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 <213> Apis mellifera

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 gat gta aca agc gca gct gtg aat cat caa aga aaa tct gca aat aat 96
 Asp Val Thr Ser Ala Ala Val Asn His Gln Arg Lys Ser Ala Asn Asn
 -1 1 5 10
 ttg gca cat tct atg aaa gtg atc tac gaa tgg aaa cac att gat ttt 144
 Leu Ala His Ser Met Lys Val Ile Tyr Glu Trp Lys His Ile Asp Phe
 15 20 25
 gat ttc ggt agc gat gaa aga aga gat gct gcg att aaa tct ggc gaa 192
 Asp Phe Gly Ser Asp Glu Arg Arg Asp Ala Ala Ile Lys Ser Gly Glu
 30 35 40
 ttt gat cac aca aaa aat tat cct ttc gat gtg gac aga tgg cgt gat 240
 Phe Asp His Thr Lys Asn Tyr Pro Phe Asp Val Asp Arg Trp Arg Asp
 45 50 55 60
 aag aca ttt gtc acc ata gaa agg aac aat ggt gta cct tct tct ttg 288
 Lys Thr Phe Val Thr Ile Glu Arg Asn Asn Gly Val Pro Ser Ser Leu
 65 70 75
 aac gtg gta act aat aaa aag ggc aaa ggt gga cct ctt cta cga cca 336

Asn	Val	Val	Thr	Asn	Lys	Lys	Gly	Lys	Gly	Gly	Pro	Leu	Leu	Arg	Pro		
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tat	cct	gat	tgg	tcg	ttt	gcc	aaa	tac	gaa	gat	tgc	tct	gga	att	gtg	384	
Tyr	Pro	Asp	Trp	Ser	Phe	Ala	Lys	Tyr	Glu	Asp	Cys	Ser	Gly	Ile	Val		
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Ser	Ala	Phe	Lys	Ile	Ala	Val	Asp	Lys	Phe	Asp	Arg	Leu	Trp	Val	Leu		
	110					115					120						
gac	tca	ggg	ctt	gtc	aat	aat	aat	caa	cct	atg	tgc	tct	cca	aaa	ttg	480	
Asp	Ser	Gly	Leu	Val	Asn	Asn	Asn	Gln	Pro	Met	Cys	Ser	Pro	Lys	Leu		
125					130					135					140		
tta	acc	ttt	gat	ctg	aaa	acc	tca	aaa	ttg	gtt	aag	caa	gtc	gag	ata	528	
Leu	Thr	Phe	Asp	Leu	Lys	Thr	Ser	Lys	Leu	Val	Lys	Gln	Val	Glu	Ile		
				145					150					155			
cca	cat	aat	att	gcc	gta	aac	gcc	acc	aca	gga	atg	gga	gaa	tta	gtt	576	
Pro	His	Asn	Ile	Ala	Val	Asn	Ala	Thr	Thr	Gly	Met	Gly	Glu	Leu	Val		
			160					165					170				
tca	cta	gct	gtt	caa	gct	ata	gat	cgt	acg	aat	act	atg	gtg	tac	ata	624	
Ser	Leu	Ala	Val	Gln	Ala	Ile	Asp	Arg	Thr	Asn	Thr	Met	Val	Tyr	Ile		
		175					180					185					
gca	gac	gaa	aaa	ggc	gaa	ggg	tta	atc	atg	tat	caa	aac	tcc	gac	gat	672	
Ala	Asp	Glu	Lys	Gly	Glu	Gly	Leu	Ile	Met	Tyr	Gln	Asn	Ser	Asp	Asp		
	190					195					200						
tcc	ttc	cat	cga	ttg	act	tcc	aat	act	ttc	gat	tac	gat	ccc	aga	tat	720	
Ser	Phe	His	Arg	Leu	Thr	Ser	Asn	Thr	Phe	Asp	Tyr	Asp	Pro	Arg	Tyr		
205					210					215					220		
acc	aaa	ttg	aca	gtc	gct	gga	gaa	agt	ttc	aca	gtg	aaa	aat	gga	att	768	
Thr	Lys	Leu	Thr	Val	Ala	Gly	Glu	Ser	Phe	Thr	Val	Lys	Asn	Gly	Ile		
				225					230					235			
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Cys	Gly	Ile	Ala	Leu	Ser	Pro	Val	Thr	Asn	Asn	Leu	Tyr	Tyr	Ser	Pro		
			240					245					250				
ctc	tct	tct	cac	ggg	ttg	tat	tat	gtt	gat	acg	gaa	caa	ttc	agg	aat	864	
Leu	Ser	Ser	His	Gly	Leu	Tyr	Tyr	Val	Asp	Thr	Glu	Gln	Phe	Arg	Asn		
			255				260						265				
cca	caa	tat	gaa	gaa	aat	aac	gtg	caa	tat	gaa	gga	tct	caa	gat	att	912	
Pro	Gln	Tyr	Glu	Glu	Asn	Asn	Val	Gln	Tyr	Glu	Gly	Ser	Gln	Asp	Ile		
	270					275					280						
ttg	aac	act	caa	tca	ttc	ggg	aaa	gta	gta	tcg	aaa	aat	ggc	gtc	ctt	960	
Leu	Asn	Thr	Gln	Ser	Phe	Gly	Lys	Val	Val	Ser	Lys	Asn	Gly	Val	Leu		
285					290					295					300		
ttc	ttg	gga	ctc	gtg	ggg	aat	tca	ggg	att	gcc	tgc	gtg	aat	gaa	cat	1008	
Phe	Leu	Gly	Leu	Val	Gly	Asn	Ser	Gly	Ile	Ala	Cys	Val	Asn	Glu	His		
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caa gta ctt cag aga gaa agt ttt gat gtt gtc gct cag aat gaa gag	1056
Gln Val Leu Gln Arg Glu Ser Phe Asp Val Val Ala Gln Asn Glu Glu	
320 325 330	
aca ctt caa atg atc gtt agt atg aaa atc atg gaa aat ctt cca caa	1104
Thr Leu Gln Met Ile Val Ser Met Lys Ile Met Glu Asn Leu Pro Gln	
335 340 345	
tcc ggc aga att aat gat cct gaa ggc aat gaa tat atg ttg gct ttg	1152
Ser Gly Arg Ile Asn Asp Pro Glu Gly Asn Glu Tyr Met Leu Ala Leu	
350 355 360	
agt aac aga atg caa aaa ata ata aac aat gat ttt aat ttc aac gac	1200
Ser Asn Arg Met Gln Lys Ile Ile Asn Asn Asp Phe Asn Phe Asn Asp	
365 370 375 380	
gta aat ttc cga att ttg ggt gcg aat gta gat gac tta atg aga aac	1248
Val Asn Phe Arg Ile Leu Gly Ala Asn Val Asp Asp Leu Met Arg Asn	
385 390 395	
act cgt tgc gga aga tat cac aat cag aat gct ggc aat cag aat gct	1296
Thr Arg Cys Gly Arg Tyr His Asn Gln Asn Ala Gly Asn Gln Asn Ala	
400 405 410	
gac aat cag aat gct gac aat cag aat gct aac aat cag aat gct gat	1344
Asp Asn Gln Asn Ala Asp Asn Gln Asn Ala Asn Asn Gln Asn Ala Asp	
415 420 425	
aat cag aat gct aac aaa caa aat ggt aat aga caa aat gat aac aga	1392
Asn Gln Asn Ala Asn Lys Gln Asn Gly Asn Arg Gln Asn Asp Asn Arg	
430 435 440	
cag aat gat aac aag caa aat ggt aac aga cag aat gat aac aag caa	1440
Gln Asn Asp Asn Lys Gln Asn Gly Asn Arg Gln Asn Asp Asn Lys Gln	
445 450 455 460	
aat ggt aac aga cag aat gat aac aag caa aat ggt aac aga caa aat	1488
Asn Gly Asn Arg Gln Asn Asp Asn Lys Gln Asn Gly Asn Arg Gln Asn	
465 470 475	
ggt aac aaa cag aat gat aac aag caa aat ggt aac aga cag aat gat	1536
Gly Asn Lys Gln Asn Asp Asn Lys Gln Asn Gly Asn Arg Gln Asn Asp	
480 485 490	
aac aag agg aat ggt aac agg caa aat gat aat caa aat aat cag aat	1584
Asn Lys Arg Asn Gly Asn Arg Gln Asn Asp Asn Gln Asn Asn Gln Asn	
495 500 505	
gat aat aat cga aat gat aat caa gtt cat cat tct tca aaa tta cat	1632
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 cac gaa tgg aaa ttc ttt gat tat gat ttc ggt agc gat gaa aga aga 96
 His Glu Trp Lys Phe Phe Asp Tyr Asp Phe Gly Ser Asp Glu Arg Arg
 20 25 30
 caa gat gca att cta tct ggc gaa tac gac tac aag aat aat tat cca 144
 Gln Asp Ala Ile Leu Ser Gly Glu Tyr Asp Tyr Lys Asn Asn Tyr Pro
 35 40 45
 tcc gac att gac caa tgg cat gat aag att ttt gtc acc atg ctg aga 192
 Ser Asp Ile Asp Gln Trp His Asp Lys Ile Phe Val Thr Met Leu Arg
 50 55 60
 tac aat ggc gta cct tcc tct ttg aac gtg ata tct aaa aag gtc ggt 240
 Tyr Asn Gly Val Pro Ser Ser Leu Asn Val Ile Ser Lys Lys Val Gly
 65 70 75
 gat ggt ggt cct ctt cta caa cct tat ccc gat tgg tcg ttt gct aaa 288
 Asp Gly Gly Pro Leu Leu Gln Pro Tyr Pro Asp Trp Ser Phe Ala Lys
 80 85 90 95
 tat gac gat tgc tct gga atc gtg agc gcc tca aaa ctt gcg atc gac 336
 Tyr Asp Asp Cys Ser Gly Ile Val Ser Ala Ser Lys Leu Ala Ile Asp
 100 105 110
 aaa tgc gac aga ttg tgg gtt ctg gac tca ggt ctt gtc aat aat act 384
 Lys Cys Asp Arg Leu Trp Val Leu Asp Ser Gly Leu Val Asn Asn Thr
 115 120 125
 caa ccc atg tgt tct cca aaa ctg ctc acc ttt gat ctg act acc tcg 432
 Gln Pro Met Cys Ser Pro Lys Leu Leu Thr Phe Asp Leu Thr Thr Ser
 130 135 140
 caa ttg ctc aag caa gtt gaa ata cca cat gat gtt gcc gta aat gcc 480
 Gln Leu Leu Lys Gln Val Glu Ile Pro His Asp Val Ala Val Asn Ala
 145 150 155
 act aca gga aag gga aga tta tca tct cta gct gtt caa tct tta gat 528
 Thr Thr Gly Lys Gly Arg Leu Ser Ser Leu Val Gln Ser Leu Asp
 160 165 170 175
 tgc aat aca aat agc gat act atg gtg tac ata gca gac gag aaa ggt 576

Cys	Asn	Thr	Asn	Ser	Asp	Thr	Met	Val	Tyr	Ile	Ala	Asp	Glu	Lys	Gly		
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Glu	Gly	Leu	Ile	Val	Tyr	His	Asn	Ser	Asp	Asp	Ser	Phe	His	Arg	Leu		
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Thr	Ser	Asn	Thr	Phe	Asp	Tyr	Asp	Pro	Lys	Phe	Thr	Lys	Met	Thr	Ile		
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	225					230					235						
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Ser	Pro	Met	Thr	Asn	Asn	Leu	Tyr	Tyr	Ser	Pro	Val	Ala	Ser	Thr	Ser		
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Leu	Tyr	Tyr	Val	Asn	Thr	Glu	Gln	Phe	Arg	Thr	Ser	Asp	Tyr	Gln	Gln		
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aat	gac	ata	cat	tac	gaa	gga	gtc	caa	aat	att	ttg	gat	acc	caa	tcg	864	
Asn	Asp	Ile	His	Tyr	Glu	Gly	Val	Gln	Asn	Ile	Leu	Asp	Thr	Gln	Ser		
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Gly	Asp	Ser	Ala	Leu	Gly	Cys	Trp	Asn	Glu	His	Arg	Thr	Leu	Glu	Arg		
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His	Asn	Ile	Arg	Thr	Val	Ala	Gln	Ser	Asp	Glu	Thr	Leu	Gln	Met	Ile		
320					325					330					335		
gct	agc	atg	aag	att	aag	gaa	gct	ctt	cca	cac	gtg	cct	ata	ttc	gat	1056	
Ala	Ser	Met	Lys	Ile	Lys	Glu	Ala	Leu	Pro	His	Val	Pro	Ile	Phe	Asp		
				340					345					350			
agg	tat	ata	aac	cgt	gaa	tac	ata	ttg	gtt	tta	agt	aac	aaa	atg	caa	1104	
Arg	Tyr	Ile	Asn	Arg	Glu	Tyr	Ile	Leu	Val	Leu	Ser	Asn	Lys	Met	Gln		
			355					360					365				
aaa	atg	gtg	aat	aat	gac	ttc	aac	ttc	gac	gat	gtt	aac	ttc	aga	att	1152	
Lys	Met	Val	Asn	Asn	Asp	Phe	Asn	Phe	Asp	Asp	Val	Asn	Phe	Arg	Ile		
		370					375					380					
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Met	Asn	Ala	Asn	Val	Asn	Glu	Leu	Ile	Leu	Asn	Thr	Arg	Cys	Glu	Asn		
	385					390					395						
ccc	gat	aat	gat	cga	aca	cct	ttc	aaa	att	tca	atc	cat	ttg	taa		1245	
Pro	Asp	Asn	Asp	Arg	Thr	Pro	Phe	Lys	Ile	Ser	Ile	His	Leu				
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 Val Val Cys Leu Gly Ile Ala Cys Gln Asp Val Thr Ser Ala Ala Val
 -10 -5 -1 1

aat cat caa aga aaa tct gca aat aat ttg gca cat tct atg aaa gtg 151
 Asn His Gln Arg Lys Ser Ala Asn Asn Leu Ala His Ser Met Lys Val
 5 10 15

atc tac gaa tgg aaa cac att gat ttt gat ttc ggt agc gat gaa aga 199
 Ile Tyr Glu Trp Lys His Ile Asp Phe Asp Phe Gly Ser Asp Glu Arg
 20 25 30 35

aga gat gct gcg att aaa tct ggc gaa ttt gat cac aca aaa aat tat 247
 Arg Asp Ala Ala Ile Lys Ser Gly Glu Phe Asp His Thr Lys Asn Tyr
 40 45 50

cct ttc gat gtg gac aga tgg cgt gat aag aca ttt gtc acc ata gaa 295
 Pro Phe Asp Val Asp Arg Trp Arg Asp Lys Thr Phe Val Thr Ile Glu
 55 60 65

agg aac aat ggt gta cct tct tct ttg aac gtg gta act aat aaa aag 343
 Arg Asn Asn Gly Val Pro Ser Ser Leu Asn Val Val Thr Asn Lys Lys
 70 75 80

ggc aaa ggt gga cct ctt cta cga cca tat cct gat tgg tcg ttt gcc 391
 Gly Lys Gly Gly Pro Leu Leu Arg Pro Tyr Pro Asp Trp Ser Phe Ala
 85 90 95

aaa tac gaa gat tgc tct gga att gtg agc gct ttc aaa att gcg gtc 439
 Lys Tyr Glu Asp Cys Ser Gly Ile Val Ser Ala Phe Lys Ile Ala Val
 100 105 110 115

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Ser	Lys	Leu	Val	Lys	Gln	Val	Glu	Ile	Pro	His	Asn	Ile	Ala	Val	Asn	
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Asp	Arg	Thr	Asn	Thr	Met	Val	Tyr	Ile	Ala	Asp	Glu	Lys	Gly	Glu	Gly	
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tta	atc	atg	tat	caa	aac	tcc	gac	gat	tcc	ttc	cat	cga	ttg	act	tcc	727
Leu	Ile	Met	Tyr	Gln	Asn	Ser	Asp	Asp	Ser	Phe	His	Arg	Leu	Thr	Ser	
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Asn	Thr	Phe	Asp	Tyr	Asp	Pro	Arg	Tyr	Thr	Lys	Leu	Thr	Val	Ala	Gly	
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Lys	Val	Val	Ser	Lys	Asn	Gly	Val	Leu	Phe	Leu	Gly	Leu	Val	Gly	Asn	
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Phe	Asp	Val	Val	Ala	Gln	Asn	Glu	Glu	Thr	Leu	Gln	Met	Ile	Val	Ser	
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Glu Gly Asn Glu Tyr Met Leu Ala Leu Ser Asn Arg Met Gln Lys Ile	
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Ala Asn Val Asp Asp Leu Met Arg Asn Thr Arg Cys Gly Arg Tyr His	
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Asn Gln Asn Ala Gly Asn Gln Asn Ala Asp Asn Gln Asn Ala Asp Asn	
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Gln Asn Ala Asn Asn Gln Asn Ala Asp Asn Gln Asn Ala Asn Lys Gln	
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 Ala Ile Leu Ser Gly Glu Tyr Asp Tyr Lys Asn Asn Tyr Pro Ser Asp
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 Gly Val Pro Ser Ser Leu Asn Val Ile Ser Lys Lys Val Gly Asp Gly
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 Gly Pro Leu Leu Gln Pro Tyr Pro Asp Trp Ser Phe Ala Lys Tyr Asp
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 Asp Cys Ser Gly Ile Val Ser Ala Ser Lys Leu Ala Ile Asp Lys Cys
 100 105 110

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Met Cys Ser Pro Lys Leu Leu Thr Phe Asp Leu Thr Thr Ser Gln Leu	
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Thr Asn Ser Asp Thr Met Val Tyr Ile Ala Asp Glu Lys Gly Glu Gly	
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Leu Ile Val Tyr His Asn Ser Asp Asp Ser Phe His Arg Leu Thr Ser	
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